

PLANT BOARD

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
DOMESTIC QUARANTINE NOTICES

PINK BOLLWORM

ADMINISTRATIVE INSTRUCTIONS AUTHORIZING METHODS OF TREATING COTTONSEED
AND MOVEMENT OF COTTONSEED FROM HEAVILY INFESTED AREA TO ANY DESTINATION
UPON CERTAIN TREATMENT

Pursuant to the authority conferred upon the Chief of the Bureau of Entomology and Plant Quarantine by the second proviso of Pink Bollworm Quarantine No. 52 (7 CFR 301.52), under section 8 of the Plant Quarantine Act, as amended (7 U. S. C. 161), and having determined that facts exist as to the pest risk involved which make it safe to modify, by making less stringent, the requirements contained in § 301.52-3 and § 301.52-4 (c) (1) and (2) of the regulations under such quarantine, the following revision of administrative instructions authorizing additional methods of treating cottonseed (7 CFR 301.52-4a; 14 F.R. 5733, 15 F.R. 840) is hereby adopted:

§ 301.52-4a Administrative instructions authorizing methods of treating cottonseed and movement of cottonseed from heavily infested area to any destination upon certain treatment.

(a) Cottonseed from lightly infested area.--For cottonseed originating in the counties of Andrews, Bailey, Baylor, Borden, Brown, Callahan, Childress, Cochran, Coke, Coleman, Collingsworth, Concho, Cottle, Crane, Crosby, Dawson, Dickens, Donley, Ector, Fisher, Floyd, Foard, Gaines, Garza, Glasscock, Gray, Hale, Hall, Hardeman, Haskell, Hockley, Howard, Irion, Jones, Kent, King, Knox, Lamb, Lubbock, Lynn, Martin, Mason, McCulloch, Menard, Midland, Mitchell, Motley, Nolan, Reagan, Runnels, San Saba, Schleicher, Scurry, Shackelford, Sterling, Stonewall, Taylor, Terry, Throckmorton, Tom Green, Upton, Wheeler, Wichita, Wilbarger, and Yoakum, in Texas, the counties of Beckham, Caddo, Greer, Harmon, Jackson, Kiowa, Tillman, and Washita, in Oklahoma, and the counties of Curry, Lea, Quay, and Roosevelt, in New Mexico, the required heat treatment incidental to certification may be accomplished at plants designated by the Chief of the Bureau as provided in § 301.52-5: Provided, That in lieu of the required heat treatment, methyl bromide fumigation under the supervision of an inspector may be substituted under the following exacting conditions:

(1) Methyl bromide fumigation of sacked cottonseed.--The seed shall be treated in an approved fumigation chamber with methyl bromide at a dosage of 3 pounds per 1000 cubic feet for an exposure period of 24 hours. The seed shall be sacked and stacked on a floor rack which will allow circulation beneath the seed. The bulk temperature of the seed at the beginning of the fumigation shall be 60° F. or above. A circulating fan shall be operated for a period of 30 minutes after the introduction of the fumigant.

An approved fumigation chamber shall be one lined with sheet metal, with all openings fitted tightly against a double row of molded sponge rubber gasketing. Chambers with more than 100 cubic feet capacity shall have a combination circulating and venting system. Chambers of less than 100 cubic feet shall have a circulating fan. All chambers must pass a pressure test whereby the time lapse is more than 22 seconds for an internal pressure of 50 mm. on a kerosene-filled open arm manometer to recede to 5 mm. pressure.

(2) Methyl bromide fumigation of bulk cottonseed in stationary chambers.--

(i) Equipment. The fumigation chamber shall be cylindrical in shape, with walls and top made of sheet steel. All joints or seams must be gastight. It shall have a foundation and base of concrete. The chamber shall have a false floor raised at least 12" above the concrete bottom perforated by 1/4" holes 4 inches apart in each direction. The floor joists shall be staggered so that free circulation of air beneath the floor can be obtained. It will be permissible to install a screw conveyor beneath the floor, protected by an inverted V shaped tunnel, to remove cottonseed from the chamber. All entrances to the chamber, except the exit conveyor channel, must be provided with covers that can be clamped in place against sponge rubber gaskets, or be sealed in some manner, to provide a gastight closure.

Each chamber must be provided with a circulatory system which can draw air from beneath the false floor and return it to the top of the chamber above the load line. This system can be contained entirely within the tank by boxing in the motor and blower on the floor near one wall, and running the return duct up the inside of the wall. If the blower and return duct are outside of the chamber the blower housing and all ducts must be gastight. The blower intake shall be connected to two lateral ducts, one across the center of each half of the bottom of the chamber. These ducts shall have four or five openings spaced equidistant along their length, and adjusted so as to take in approximately equal portions of air at each opening. The duct may be buried in the concrete floor with only the risers opening above the level of the concrete, or it can be laid directly on the concrete surface.

The blower shall have sufficient capacity to establish air circulation through a full load of cottonseed within 10 minutes. (This fact will be determined by pressure readings above and below the load of cottonseed.) In experimental tests, a blower with a blade wheel 40" in diameter, run at 1800 r.p.m., established air circulation in 8 minutes in a 54,580 cu. ft. chamber through seed 40' deep. As near as can be determined, this blower had a rating of 6000 to 8000 c.f.m. at a static pressure of 10".

The return duct shall be arranged so that the discharge can be diverted to the open air in order that the fumigant can be evacuated at the end of the exposure period.

(ii) Dosage. The dosage of methyl bromide to be used in the case of all-metal cylindrical fumigation chambers shall be as follows:

Average Seed Temperature	:	Dosage	:	Exposure
	:	rate (lbs.	:	period
	:	per 1,000	:	(hours)
	:	cu. ft.)	:	
60° F. or above	:	(4	:	24
	:	(6	:	12
Below 60° F.	:	(5	:	24
	:	(7.5	:	12

The dosage shall be introduced as a spray into the return duct at some point beyond the blower.

The circulatory system shall be operated at the beginning for a period to be designated by the inspector in charge.

(3) Methyl bromide fumigation of bulk cottonseed in railway cars or vans.—(i) Equipment. All-metal freight cars or all-metal trucking vans will be acceptable as fumigation chambers. The floor of the car or van may be of wood of tight construction. The doors must be single doors and not over 7 feet in width. Sisal-kraft paper shall be used to cover wooden floors of cars or vans. Doors and other apertures must be sealed in a manner and with materials as required by the inspector.

Each railway car or trucking van shall be prepared so that air can be withdrawn from beneath the seed and returned to the space above the load. This shall be provided by a dispensable duct system made of 4" downspout perforated at 2" intervals on three sides, laid on the car floor. A portable blower with connecting tubular duct shall be attached to the duct system in the car long enough to provide the required circulation. This blower shall have a capacity of not less than 625 CFM against 5" static pressure, and shall be of a design that can be made gastight. The intake side of the blower shall be connected with the duct outlet extended through a paper grain door (installed in the aperture of the regular door) by means of a 10' length of 6" spiral tubing. A 15' length of 8" spiral tube shall be connected to the exhaust side of blower to return the air to the space above the load.

(ii) Dosage. The dosage of methyl bromide to be used in the case of all-metal railway cars or all-metal trucking vans shall be as follows:

Average Seed Temperature	Dosage rate (lbs. per 1,000 cu. ft.)	Exposure period (hours)
60° F. or above	7	24
Below 60° F.	8	24

The dosage shall be introduced as a gas into the return duct at some point beyond the blower. The gas must be volatilized as it is introduced into the chamber in manner and method required by the inspector.

The railway car or trucking van shall be loaded in such manner as to leave a two-foot air space above the seed.

(b) Cottonseed from heavily infested area.—Cottonseed located within heavily infested areas, as defined in § 301.52-2, which has been treated as provided in § 301.52-4 (c) (1) as a part of the continuous process of ginning and subsequently protected from contamination and in addition has been given, within the heavily infested area, any one of the following additional treatments in approved equipment under the supervision of an inspector and in a manner approved by him, may be certified for movement to any destination.

(1) Additional heat treatment.—A second heat treatment shall be given with steam as the heating medium in an apparatus separate and apart from the gin or gins which applied the initial heat treatment. The mass temperature of the seed must be raised to at least 155° F. during an exposure period of 2 minutes. The exposure period is the length of time required for the seed

to travel from point of entrance into the heater to the point where the temperature reading of the seed is taken beyond the exit of the heater. The heating apparatus must be so constructed as to apply an adequate amount of live steam to the seed promptly upon entrance into the apparatus, and radiated heat for the full length of the heating unit. The apparatus shall be constructed so as to assure a constant and uniform flow of cottonseed through the machine when in operation and equipped with devices which will stir the seed so as to expose each seed to both the introduced steam and radiated heat during the entire exposure period.

(2) Methyl bromide fumigation of bulk or sacked cottonseed.--As an alternative treatment, any type of methyl bromide fumigation authorized in subparagraphs (1), (2) or (3) of paragraph (a) of this section for certain counties in the lightly infested area may be employed as the additional treatment.

The Bureau of Entomology and Plant Quarantine has made tests which show that methyl bromide fumigation of cottonseed does not affect its germination or processing qualities. It has not, however, had an opportunity to test seed under all conditions or from all areas. Those who elect to use this method of treatment are, therefore, hereby notified that no liability shall be attached to the Department of Agriculture or any of its employees for damage to seed that might result from application of the treatment of cottonseed with methyl bromide.

(c) Approval.--All containers, equipment and apparatus for treatments under these instructions shall be approved by the Bureau of Entomology and Plant Quarantine. Inspectors will approve only such containers, equipment and apparatus as are suitable and effective for the purpose. Any person contemplating the erection of equipment or the use of railway freight cars or trucking vans as fumigation chambers under these instructions should make application and submit plans of proposed structures for approval to the Bureau of Entomology and Plant Quarantine. After construction of fumigation chambers, the Bureau of Entomology and Plant Quarantine will require performance tests of the loaded chambers as shall be deemed necessary before final approval is granted. The use of all-metal railway cars or trucking vans as fumigation chambers is available to all shippers from the counties listed in paragraph (a) of this section, but utilization of this procedure will be governed by the trained and competent personnel available that can be assigned to the supervision of this type of fumigation. This provision definitely limits the number of shipping points that it will be possible to designate. Each individual railway car or trucking van must be approved by an inspector of the Bureau of Entomology and Plant Quarantine before loading with cottonseed to be fumigated. Certificates for movement of seed treated with methyl bromide will be refused if satisfactory fumigation has not been obtained in accordance with performance tests made of the loaded railway car, trucking van or other approved fumigation chamber.

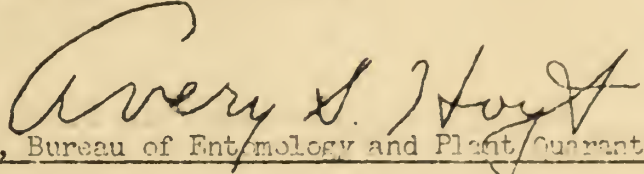
(Sec. 8, 37 Stat. 318, as amended; 7 U. S. C. 161; 7 CFR 301.52)

These instructions shall become effective July 12, 1950, when they shall supersede B. E. P. Q. 558, effective June 11, 1948, as amended September 20, 1949, and February 16, 1950 (7 CFR 301.52-4a, as amended; 14 F.R. 5732, 15 F.R. 840).

These revised administrative instructions add the counties of Curry and Quay, New Mexico to the lightly infested area in which certain treatments may be applied as a means of securing certification for movement to any destination. Such treatments are not now authorized for use in these counties. The

revision also authorizes a new method of fumigating bulk cottonseed in railway cars or trucking vans as a second treatment preliminary to certification for movement from the heavily infested area to any destination. The revision therefore relieves restrictions heretofore imposed. It is important that shippers be afforded this relief at the earliest possible date. Accordingly, pursuant to the provisions of section 4 of the Administrative Procedure Act (5 U. S. C. 1003) it is found, upon good cause, that notice and public procedure on this amendment are impracticable and contrary to the public interest, and good cause is found for the issuance of the revision effective less than 30 days after its publication in the Federal Register.

Done at Washington, D. C., this 10th day of July, 1950.


Chief, Bureau of Entomology and Plant Quarantine

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